

STAFF REPORT
For Regional Water Board
Ratification of
Monitoring and Reporting Program R-1-2001-10
Issued To Sonoma Coast Associates
And
Monitoring and Reporting Program R-1-2001-11
Issued To Russian River Redwoods
Pursuant to California Water Code Section 13267(b)1

I. INTRODUCTION

In late 1999-early 2000, Russian River Redwoods (RRR) and Sonoma Coast Associates (SCA) submitted, respectively, timber harvest plans (THPs) 1-99-464 SON and 1-00-040 SON to the California Department of Forestry and Fire Protection (CDF) for two properties in the headwaters of Jenner Gulch in western Sonoma County. The two THPs, in combination, cover approximately 367 acres, or 33% of the Jenner Gulch watershed. Jenner Gulch, a tributary of the Russian River, provides the sole source of domestic water for approximately 126 existing connections serving approximately 250 people, in the community of Jenner. Jenner Gulch also provides habitat for anadromous fish in the lower portion of the watershed. Both coho salmon and steelhead trout have been listed as threatened species under the Federal Endangered Species Act. The Russian River, including its tributaries, is listed under Section 303(d) of the Clean Water Act as sediment impaired.

On February 27, 2001, the Executive Officer, pursuant to California Water Code Section 13267 (b), issued Monitoring and Reporting Program R1-2001-10 and Monitoring and Reporting Program R1-2001-11 (hereafter individually referred to as M&R R1-2001-10 or M&R R1-2001-11, as applicable, M&R or Order, and collectively referred to as M&Rs or Orders) to SCA and RRR, respectively, to ensure compliance with applicable water quality laws. The M&Rs were issued after the Regional Water Board staff's attempts to encourage CDF to require such monitoring in the THPs were unsuccessful.

II. APPLICABLE LAWS, PLANS AND POLICIES

The M&Rs were issued pursuant to California Water Code Section 13267 and inconsideration of the Water Quality Control Plan for the North Coast's (Basin Plan), relevant portions of which are summarized below.

California Water Code Section 13267

California Water Code Section 13267 authorizes a regional board to require "any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste within its region ... that could affect the quality of waters within its region" to "furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires." Section 13267 further provides that the "burden, including cost, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports."

¹ This staff report constitutes the testimony of the Regional Water Board staff on the hearing for ratification of the Monitoring and Reporting Programs R1-2001-10 and R1-2001-11.

The ability to regulate and ensure protection of the beneficial uses of water throughout the State are closely linked to the Regional Water Boards authority to require submittal of monitoring and reporting reports. The regional boards throughout the State extensively use Section 13267 Orders as a basic investigative tool to assess water quality impacts from discharges of waste to waters of the State. Monitoring and reporting programs are issued for numerous activities that may result in discharges to waters of the State, including many industrial sites, rock quarries, and other activities where sediment is the primary waste that may affect water quality.

Basin Plan Prohibitions and Water Quality Objectives

The Basin Plan Action Plan for Logging, Construction, and Associated Activities includes the following prohibitions:

- a. “The discharge of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited.
- b. The placing or disposal of soil, silt, bark, slash, sawdust, or other organic, and earthen material from any logging, construction, or associated activities of whatever nature at locations where such material could pass into any stream or watercourse in the basin in quantities which could be deleterious to fish, wildlife, or other beneficial uses is prohibited.”

The Basin Plan’s Guidelines for Implementation and Enforcement of Discharge Prohibitions relating to Logging, Construction and Associated Activities identify, in part, the following narrative water quality objectives from Section 3 of the Basin Plan as of particular importance in protecting beneficial uses from unreasonable effect due to discharges from logging, construction, or associated activities:

- a) “Turbidity shall not be increased more than 20 percent above naturally occurring background levels.
- b) Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.
- c) The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or to adversely affect beneficial uses.”

In addition, the Basin Plan states “controllable water quality factors shall conform to the water quality objectives contained herein. When other factors result in the degradation of water quality beyond the levels or limits established herein as water quality objectives, then controllable factors shall not cause further degradation of water quality. Controllable water quality factors are those actions, conditions, or circumstances resulting from man’s activities that may influence the quality of the waters of the State and that may be reasonably controlled.” Reasonably controllable activities which may influence the quality of waters of the State and the United States include selection of silvicultural method, yarding and site

preparation prescriptions, harvest rates, timing and location; location, design, construction, use and abandonment of roads, landings and skid trails; and design, installation, and maintenance of drainage structures, drainage facilities, and erosion controls.

Regarding investigative and coordinating activities, the Basin Plan also states that “The staff may request additional information from any individual or firm engaged in timber operations, road building, or related construction activity in accordance with Water Code section 13267 as may be necessary to implement their investigations and carry out the policy of this Regional Water Board”.

III. THE REGIONAL WATER BOARD STAFF’S INVOLVEMENT IN THE Timber Harvest PlanS REVIEW PROCESS

THP 1-99-464 SON was submitted to CDF by RRR on November 24, 1999. North Coast Regional Water Quality Control Board (Regional Water Board) staff participated in the three day pre-harvest inspection (PHI) for the 122 acre THP. Regional Water Board staff’s observations and recommended mitigation measures developed from the onsite inspections are described in the Regional Water Board staff PHI reports, dated February 3, 2000, June 15, 2000 and February 23, 2001. Regional Water Board THP file, 1-99-464 SON, is incorporated herein by this reference.

THP 1-00-040 SON was submitted to CDF on February 4, 2000 by SCA. Regional Water Board staff participated in the three day PHI for the 245 acre THP. Regional Water Board staff’s observations and recommendations resulting from the series of onsite inspections are contained in the PHI report dated May 10, 2000. The Regional Water Board THP file, 1-00-040 SON, is incorporated herein by this reference.

The Regional Water Board staff’s PHI reports for the two THPs contain numerous recommended mitigation measures to ensure that the proposed timber operations comply with the objectives and prohibitions contained in the Basin Plan and not deleteriously effect the domestic water supply of the community of Jenner. These mitigation measures were developed in response to the geologically unstable nature of the watershed, the presence of the community of Jenner’s domestic water supply intake approximately .7 miles downstream of one of the THP boundaries, the status of impairment of the Russian River and its tributaries, the extent of proposed timber harvest (on 33% of the watershed) and evidence of ongoing erosion and soil and earthen material discharges related to past timber, construction and associated activities. Threatened violations of the discharge prohibitions for logging, construction and associated activities contained in the Basin Plan were observed during the numerous inspections. These threatened violations include the discharge of soil and earthen material from poorly constructed and failed road crossings, poorly drained and maintained roads and at least one diverted watercourse. These roads were used for previous timber harvest related activities.

Some of the mitigation measures recommended by Regional Water Board staff included:

- development of a site specific erosion control plan to address sediment delivery sites along the existing road systems,
- incorporation of additional erosion control measures to decrease potential for soil and earthen material discharges to watercourses from road use,
- retention of all trees along the unstable stream banks,
- upgrading of classification and associated protection measures for numerous watercourses within the THP areas, and
- incorporation of an instream water quality monitoring plan designed to evaluate the effectiveness of the mitigation measures and timber harvest practices in protecting the domestic water supply for the community of Jenner and other beneficial uses of water from excess sediment.

Regional Water Board staff has participated in the CDF review team process for both THPs at all stages of review to date, including the first review meetings, the PHIs, and two second review meetings for THP 1-00-040 SON.

Regional Water Board staff's concerns associated with THPs 1-00-040 SON and 1-99-464 SON are related to the following:

- The unstable and highly erodible nature of the watershed (as evidenced by the geologic map included in both THPs),
- the extent of the proposed harvest plans (33% of the watershed area within one or two years),
- the extensive proposed mitigation measures to control existing soil erosion including road reconstruction.

These activities (if not properly implemented and monitored) may cause increased sedimentation that can adversely impact the domestic water supply of Jenner, fisheries habitat, and other beneficial uses and impede hydrologic recovery in Jenner Gulch.

Representatives of RRR and SCA were first notified of the need for the inclusion of an instream water quality monitoring plan as a component of the THPs on January 14, 2000, during the PHI for THP 1-99-464 SON. Regional Water Board staff discussed the need and rationale for the monitoring plan with representatives of RRR and SCA and CDF staff throughout the lengthy review process for both THPs. To ensure consistency, reduce duplication of effort and to increase staff and resource efficiency, the Regional Water Board staff expressed a preference throughout the THP review process for incorporating the water quality monitoring and reporting plans into the THPs as provided by the Forest Practice Rules.

The purpose of the instream water quality monitoring plan recommended by Regional Water Board staff to RRR, SCA and CDF was to ensure compliance with the Basin Plan objectives and prohibitions for protection of the beneficial uses of water. The monitoring was to be used as an investigative tool to provide early detection of sediment source sites causing impacts to the Jenner Gulch domestic water

supply (DWS) and other beneficial uses of water. This would permit timely inspection and appropriate corrective action of controllable water quality factors associated with THPs 1-00-040 SON and 1-99-464 SON if detection of non-compliance occurred. This approach is commonly used by Regional Water Board staff in determining compliance with the objectives and prohibitions of the Basin Plan for many other land use activities, such as storm water discharges of sediment from industrial sites.

The second review team meeting for THP 1-00-040 SON was held on February 20, 2001. During a second review team meeting, the CDF review team chairperson makes the final decision on which mitigation measures should be included in an approved THP to ensure the THP complies with the Forest Practice Rules and other applicable laws and regulations. At the second review meeting for THP 1-00-040 SON, the CDF review team chairperson rejected the Regional Water Board staff's recommendation to incorporate an instream water quality monitoring plan into the THP. The recommendation for an instream water quality monitoring program was supported by Sonoma County Board of Supervisors, Sonoma County Public Works Department staff, members of the Jenner Water Citizen's Advisory Committee (JWCAC) and citizens from the community of Jenner. JWCAC is a citizen's group appointed by the Sonoma County Board of Supervisors as an oversight committee for the protection of the Jenner Gulch watershed.

Instead of requiring SCA to comply with the Regional Water Board staff's request for an instream water quality monitoring as a component of timber operations, CDF required that a hillslope effectiveness monitoring be included in the THP. The hillslope effectiveness monitoring program developed by SCA, revised, and agreed to by CDF is not designed to, and will not be able to, ensure compliance with the objectives and prohibitions of the Basin Plan. Ensuring compliance with the Basin Plan is the objective of the monitoring plan recommended by Regional Water Board staff. A description of the SCA/RRR/CDF hillslope monitoring plan is discussed below under the Monitoring and Reporting Programs section of this report.

CDF also required SCA to provide emergency domestic water for the community of Jenner if timber harvesting or associated activities resulted in water quality conditions in Jenner Gulch that are unsuitable for domestic water supply. Such requirement would only lessen the short-term effects caused by timber harvesting activities, but the underlying degradation of water quality and beneficial uses would not be addressed.

Without including an instream water quality monitoring plan as a component of timber operations, compliance with the objectives and prohibitions contained in the Basin Plan cannot be monitored and subsequent protection of the beneficial uses of Jenner Gulch cannot be ensured. The Forest Practice Rules (FPR) require that a THP be denied if implementation of the plan would cause a violation of any requirement of the applicable water quality control plan [FPR 898.2(h)]. The FPR define the Quality of Water as "the level of water quality as specified by the applicable Water Quality Control Plan, including its water quality objectives, policies and prohibitions" (FPR 895.1). Furthermore, the FPR state "The quality and beneficial uses of water shall not be unreasonably degraded by timber operations." (FPR 916.3). In evaluating cumulative watershed impacts, a THP "... must comply with the quantitative or narrative water-quality objectives set forth in an applicable Water Quality Control Plan" (FPR 912.9). The FPR also require the measures used to protect a watercourse be determined by the beneficial uses of that water. If requested by Regional Water Board staff, a post-harvest effectiveness monitoring plan

could be included as a condition of plan approval (FPR 916.10). Despite these regulations, CDF did not agree to incorporate a water quality monitoring plan in the THP 1-00-040 MEN. In addition, the hillslope effectiveness monitoring recommended by CDF staff into the THP does not ensure timely detection and control of sources of sediment that threaten to discharge into waters of the State. Nor does the CDF staff recommended monitoring provide a mechanism to determine compliance with the Basin Plan objectives and prohibitions

On February 23, 2001 Regional Water Board staff filed a letter of non-concurrence with the second review team chairperson's recommendation for approval of THP 1-00-040 SON without the incorporation of an instream water quality monitoring plan.

CDF staff responded to Regional Water Board staff's non-concurrence with a March 12, 2001 and a March 29, 2001 memo. Neither of these memos provide credible reasons for rejecting Regional Water Board staff's recommendation for a monitoring plan. In fact, the CDF memo dated March 12, 2001, focused on critiquing the M&R R1-2001-10 issued to SCA.

The primary issues raised in the March 12, 2001 and March 29, 2001 CDF memos relate to:

- the "reasonableness and practicality" of the monitoring plan in terms of human safety and duration of monitoring plan,
- the ability of the monitoring plan to provide "statistically valid conclusions regarding land use impacts",
- the ability of a grab sample monitoring plan to detect turbidity increases of greater than 20% and that such increases were not expected after the initial road improvement flushes of sediment occurred (in response to rain events), and
- that it is not reasonable to require that the Basin Plan standards for no turbidity increase of greater than 20% be applied during the initial flush period.

In a March 27, 2001 memo to CDF, Regional Water Board staff responded to the issues described above. The Regional Water Board staff memo provided further clarification and rationale to dispel the misconceptions of the monitoring plan expressed in the CDF memo. The intent of the Regional Water Board issued M&Rs is discussed in the Monitoring and Reporting Programs section of this report.

Regional Water Board staff infers from CDF staff's memo that there is a concern that the initial flush of sediment from the proposed road repair may likely result in greater than 20% (if not 200%) increase in turbidity following initial road work. CDF staff contends that the initial flush of sediment from road improvement activities cannot reasonably be considered a violation of the Basin Plan. This contention is false. The Basin Plan acknowledges that land management activities may likely result in short term increases in turbidity. To address this issue, the water quality objective for turbidity allows for increases up to 20% above naturally occurring background levels. The water quality objective for turbidity also allows for zones of dilution within which high percentages can be tolerated upon issuance of discharge permits or waiver thereof. The waiver adopted by the Regional Water Board in 1987 (Resolution No. 87-113) allows the Regional Water Board to waive the filing of report of waste discharge requirements for specific land uses (including timber harvesting) when certain conditions are met. One of these

conditions is that the discharge must ensure compliance with the applicable sections of the Basin Plan. This includes the turbidity objective.

The March 29, 2001 CDF memo responding to Regional Water Board staff's non-concurrence concluded, in part, that "the operation as proposed and mitigated was determined by the Second Review Chair to incorporate the necessary mitigation measures to avoid an adverse impact and comply with the Basin Plan (emphasis added)". Based on the above discussion regarding CDF staff's contention that it is unreasonable to consider short term flushes of sediment as violations of the Basin Plan, the argument that the plan as mitigated will comply with the Basin Plan is unsubstantiated and not supported by evidence.

At the time of this writing, CDF had not yet made a final decision on THP 1-00-040 SON.

At the time of this writing, the second review team meeting for THP 1-99-464 SON has not been scheduled. There is no indication, however, that CDF will reverse their position at this meeting and require the inclusion of an instream water quality monitoring plan in THP 1-99-464 SON.

IV. The Monitoring and Reporting Programs

Due to the lack of inclusion of the Regional Water Board staff's recommended water quality monitoring plan in the THP through the CDF review process, the Executive Officer of the Regional Water Board issued Orders on February 27, 2001, pursuant to California Water Code Section 13267, requiring submittal of monitoring program reports from SCA and RRR. M&R R1-2001-10 and M&R R1-2001-11 were issued to SCA and RRR, respectively (Attachment 1 and Attachment 2). The M&Rs were issued by the Executive Officer, under his delegated authority, in response to ongoing sediment discharge from legacy conditions during significant rain events and threatened discharges from proposed timber harvest operations in the Jenner Gulch watershed.

The primary purpose of the M&Rs is to ensure compliance with the Basin Plan prohibitions and objectives through a monitoring program that establishes early detection of water quality impacts and initiates timely inspections of the THP areas. These inspections would be conducted to determine if a discharge resulting in increased turbidity into Jenner Gulch was originating from the THP areas. The inspections would afford SCA and RRR an opportunity to address any discharges or threatened discharges from sediment sources. Inspection of the THP area would occur when specific turbidity levels were attained at both the Jenner Gulch water treatment plant and at the sampling stations identified in the M&Rs. Turbidity was selected as the defining water quality parameter due to the sensitivity of the Jenner Gulch water treatment plant to high turbidity levels and with consideration of other key beneficial uses of water. Turbidity measurements are also the most common parameter used to monitor the quality of domestic water and the effects of a specific project (Mac Donald, 1991).

A. Requirements, Intent and Design of the Monitoring and Reporting Programs

M&R R1-2001-10 requires SCA to conduct instream water quality turbidity monitoring at four locations associated with THP 1-00-040 SON. Three of these stations are located on Jenner Gulch and the fourth station is located on an unnamed tributary of Jenner Gulch that drains a portion of THP 1-00-040 SON. The number and location of the sampling stations were selected based on the site specific position of the THP in the watershed, the watershed stream hydrography, and logistics. Regional Water Board file, Sonoma Coast Associates-Jenner Gulch, is incorporated herein by this reference.

M&R R1-2001-11 requires RRR to conduct instream water quality turbidity monitoring at one location associated with THP 1-99-464 SON. The station is located on Jenner Gulch below the boundary of THP 1-99-464 SON. The number and location of the sampling station was selected based to the site specific position of the THP in the watershed, the stream hydrography, and logistics. Regional Water Board file, Russian River Redwoods-Jenner Gulch, is incorporated herein by this reference.

Both the M&Rs require the collection of grab water samples at the location(s) described in the M&R whenever any of the following events occur:

- any day when turbidity at the Sonoma County's Jenner Gulch water supply treatment plant exceeds 60 NTUs.
- if daily turbidity data from the Sonoma County's Jenner Gulch water supply treatment plant is not available by noon of the same day, then grab water samples shall be collected during each significant rainfall event. A significant rainfall event shall be defined as a rainfall event producing greater than 1.0 inch of rain in any 24-hour period as measured at the Venado rain station after an initial accumulation of 3 inches of rain during the rain year (July 1 to June 30 of each year). A significant rainfall event is considered terminated after two consecutive days with less than 0.2 inch of rain in a 24-hour period.
- No more than one sampling event is required within any consecutive seven-day period.

The M&R requires a hillslope monitoring inspection whenever the turbidity measured at the sampling station(s) exceeds turbidity values defined in the M&R. Hillslope monitoring includes:

- following the observed turbidity trail to its source (within the THP area);
- mapping, photographing and describing each sediment source within the area covered by the respective THP. Required water quality observations include stream bank erosion, natural landslide or debris flow, land management related erosion, road related erosion, and natural erosion that resulted in increased turbidity;
- determination of the cause of the discharge resulting in the increased turbidity;
- correction of the human-caused turbidity source(s) as soon as possible if one is detected. If the turbidity source is not easily corrected, a long term erosion control plan is to be developed, and
- notification of the Regional Water Board staff the day of the inspection if a source of increased turbidity is identified.

The M&Rs require submittal of monthly reports to the Regional Water Board detailing the activities of the previous month. The reports include:

- daily rainfall totals for the designated rain station for each day during the previous month,
- daily turbidity measurements from the Sonoma County domestic water supply intake in Jenner Gulch for each day during the previous month,
- turbidity grab sample measurements collected during the previous month as described in the M&R as well as the estimated stream flow at the sampling station,
- copies of the field collection log, and
- detailed description of any erosion control activities taken during the previous month, and if long term erosion control measures are needed.

The monitoring plan does not require SCA or RRR to take samples during unsafe conditions. As was pointed out by Regional Water Board staff during the lengthy second review process, no sample collection would be required nor was intended in the monitoring plan under situations that would result in unsafe working conditions. In-stream sampling locations were discussed with a representative of SCA prior to monitoring plan issuance. At this meeting, access to the sampling locations described in the monitoring plan were determined to be feasible.

The monitoring plan was not designed to provide research level data on land use impacts or to determine statistically defensible background/existing instream parameters. Statistical inferences or generalizations will not be generated from the data collected under the monitoring plan. Nor will the data be used to quantify risk, error or uncertainty. These are the primary benefits of a “statistically valid” sampling design as described in Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska (Mac Donald, 1991). Rather, as Regional Water Board staff has articulated throughout the lengthy THP review process, the data generated from the monitoring plan is to be used as a trigger for conducting streamside and hillslope inspections. These inspections will be conducted to determine the cause of increased levels of turbidity. As such, statistics are not an issue. Direct observation of the turbidity trail and its source will lead to a 100% confidence in the source. The information generated from the monitoring plan will allow the Regional Water Board staff to evaluate the effectiveness of the suite of management practices developed to protect the domestic water supply and other beneficial uses of water. Effectiveness monitoring is used to evaluate whether the specified activities had the desired effect (MacDonald, 1991). Mac Donald also states that in most cases, monitoring of individual management practices is quite different from monitoring to determine whether the cumulative effect of all the management practices results in adequate water quality monitoring. He further states that monitoring the overall effectiveness of management practices usually is done in the stream channel. Regional Water Board staff believes the only way to ensure that the harvest plans comply with water quality objectives, policies and prohibitions (the desired goal) is to evaluate the condition of “waters of the State,” not individual management practices or construction sites (e.g. crossings) such as is required in the SCA/RRR/CDF hillslope monitoring plan. It is not the Regional Water Board staff’s intent to require research level data collection or to use the data to predict long-term land use impacts. Nor is it the objective of the monitoring plan to determine whether the value of a parameter has changed over time. To reiterate, the data will be used to trigger timely

inspection of the proposed harvest area, and provide a mechanism to facilitate prompt implementation of corrective work for controllable sources of turbidity.

The M&Rs required implementation of the monitoring and reporting within 15 days of issuance of the M&Rs. The M&Rs were to be implemented immediately due to:

- the presence of erosion features and unstable conditions from past activities (“legacy conditions”), poorly maintained roads and crossings and the potential for these sites to result in sediment discharge during rain events,
- the potential for threatened discharge from proposed activities, and
- the fact that the timing of THP approval and implementation is uncertain.

It is unlikely that a monitoring or inspection event will be triggered before late fall of 2001 due to the turbidity and rain event requirements in the M&Rs.

Since the issuance of the M&Rs, RRR and SCA have submitted reports as required, but have not yet conducted hillslope inspections as the triggers for conducting these activities have not occurred. Sampling events will likely occur only during significant storm events in the winter months. It is expected that less than 12 sampling events will occur on a yearly basis, based upon review of rainfall and turbidity records from recent years.

B. The Monitoring and Reporting Programs Satisfy Water Code Section 13267 (b)

As stated above, California Water Code Section 13267 authorizes a regional board to issue 13267 (b) Orders to any person who has “discharged, discharges, or is suspected of discharging, or who proposes to discharge waste within its region.” In SCA’s and RRR’s case, there are both ongoing and continuing discharges during significant rain events from legacy logging, construction and associated activities and potential discharges associated with timber harvesting activities, including road reconstruction, under the THPs. Failing roads, reconstructed and maintained by both SCA and RRR, also threaten to result in sediment discharges. The discharges are of a special concern due to their adverse impact on the beneficial uses of Jenner Gulch. The discharges may also be or result in violation of the Basin Plan prohibitions on discharges and threatened discharges of earthen material in quantities deleterious.

Specifically, the Regional Water Board staff determined, based on numerous onsite inspections, that there are numerous conditions and proposed activities on the THP areas that have resulted in discharges or are likely to result in discharges. For example, the Sediment Source Assessment, Jenner Gulch Watershed, Sonoma County, CA (Attachment 3), written by Timothy C. Best, CEG, and included in both THPs, states, “About 9.6 miles of road were constructed by 1966. This includes about 2.7 miles of streamside road located immediately adjacent to Jenner Gulch and its larger tributaries ... Field observations revealed that short segments of the old Jenner Gulch Road, which extended up the valley bottom are still eroding and contributing sediment to Jenner Gulch.” Timothy Best also stated in his assessment that “My field observations also revealed several old and on-going diversions within forested areas. I estimate that up to 15% of all sediment derived from bank erosion and gullyng was road or

skid trail related." It is apparent that many of the sediment sources identified in the assessment by Mr. Best are indeed related to human activity and are continuing to contribute sediment to Jenner Gulch.

It is unclear from the record exactly what portions of what road system were used at what point in time by what landowner for logging related activities. However, a copy of the THP map for THP 1-79-175 SON, previously submitted by RRR for ownership in the Jenner Gulch watershed, is included in this report as Attachment 4. This map shows virtually the same road system as that associated with THP 1-99-464 SON and on which threatened discharge of earthen material were observed during the onsite inspections.

The discharges, both ongoing during significant rain events and threatened by timber harvest activities, by SCA and RRR are precisely those kinds of discharges for which the Regional Water Board may issue California Water Code Section 13267 (b) Orders for monitoring program reports.

The M&Rs also satisfy California Water Code Section 13267 (b)'s requirement that the "burden, including costs, of monitoring reports must bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports."

The SCA/RRR/CDF hillslope monitoring plan requires 7 inspections per year for up to 6 years, while Regional Water Board staff estimate that up to 12 monitoring events per year may be required until the M&R is revised or rescinded. It is anticipated that the M&Rs may be in effect for an estimated total of 5 years. This includes the timber harvest operational period and the 3-year maintenance period. The estimation of instream monitoring events is based on the number of times the turbidity measurements at the water treatment plant exceed 60 NTUs and the number of times a "significant rain event" occurred at the designated rain station (Venado). An estimation of the number of times an actual inspection of the harvest area will occur is not possible at this time as there is no data to indicate how often the turbidity measurements at the sampling stations will exceed the values described in the M&Rs, thus triggering an inspection. As of the writing of this report, no inspections have been triggered by the requirements of the M&Rs during the months of March or April of 2001.

Currently, the SCA and RRR are collaborating on the required monitoring. Information in the THP records indicate that joint monitoring may cost approximately \$14,000 per year. Assuming the accuracy of this cost estimate, the total projected cost for conducting 5 years of monitoring is \$70,000 to be shared by both SCA and RRR. As mentioned in this report, 367 acres are proposed for harvesting using primarily the selection method. A conservative estimate of the value of the timber to be harvested is roughly \$2,000,000.

One of the primary benefits of the monitoring plan is that it will demonstrate if increased turbidity at the water intake is due to erosion of soils and earthen materials from the THP areas. The monitoring plan will also trigger timely inspections of the THP areas and may expedite corrective action, as feasible, to prevent further discharges resulting in impacts to the domestic water supply and other beneficial uses of water. If any increased turbidity is found not to be from the THP areas, then staff can investigate other adjacent lands where the turbidity originates. Monitoring is especially critical here to assess and ensure that beneficial uses such as domestic water supplies are not being impacted by conditions and activities on the THP areas. Russian River Utilities has indicated that the treatment plant shuts down when

turbidity levels are 60 NTUs or less, depending on water storage levels. The Jenner Gulch treatment plant turbidity data indicates that turbidity levels exceed 60 NTUs approximately twelve times a year. Considering the great need and benefits of the monitoring reports, expending approximately \$14,000 is highly reasonable and represents a low cost program when compared with other dischargers' and proposed dischargers' expenditures for monitoring.

C. The Monitoring Proposed by SCA is Insufficient to Ensure Protection of Beneficial Uses

The objective of the RRR/SCA/CDF hillslope effectiveness monitoring plan is to conduct a finite number of inspections per year (to be conducted at Sonoma County's request) during which potential high-risk sediment sites will be evaluated. The hillslope monitoring plan is based on the approach that the THP area sites evaluated would include watercourse crossings, road segments and landings. Data would be recorded, such as dimension of erosion site (length, width, and depth), cause of erosion, classification of nearest watercourse, and determination if repair is feasible and what repair work would be implemented. One instream inspection per year would also be conducted at Sonoma County's request. No instream monitoring is included in the SCA/RRR/CDF monitoring plan. This prevents the monitoring plan from providing necessary information to determine if the erosion controls are effective in protecting the downstream domestic water supply. The approach used under the SCA/RRR/CDF monitoring plan is more appropriately applied in determining the effectiveness of specific measures at individual sites (e.g., a crossing or a landing) in protecting the road and crossing infrastructure, rather than the effectiveness of the measure to comply with the Basin Plan.

As part of their relationship with Gualala Redwood Inc (GRI), a related timber company, SCA has established a instream sampling station in Jenner Gulch to collect data on the long-term trend of specific water quality parameters in Jenner Gulch. This monitoring is unrelated to the SCA/RRR/CDF hillslope effectiveness plan and is being conducted across GRI's ownership to provide data for their land management decisions. According to the SCA representative, this station will be sampled every 5 years or sooner. Parameters include stream temperatures, amount of large woody debris in the channel, stream substrate size, and canopy cover. While the data generated from this monitoring program will provide useful information for trend analysis, it does not provide any data useful for evaluating the condition of Jenner Gulch in terms of fine sediment inputs. Fine sediment is the most important parameter in evaluating water quality conditions for domestic water supply use.

V. issues RAISED BY SCA AND RRR

On March 29, 2001 SCA and RRR appealed the issuance of the Orders to the State Water Board. The appeal petitions, one for each Order, also requested that the petitions be held in abeyance pending the outcome of further meetings with Regional Water Board and staff. The State Water Board has granted the request for the petitions to be held in abeyance. As of the time of this writing, Regional Water Board staff has met with representatives of SCA and RRR on three separate occasions to discuss the intent, feasibility and logistics of the M&Rs. No resolution has been reached.

SCA and RRR have each raised substantially the same issues in their petitions. Their major issues are discussed below.

SCA and RRR allege that the Orders reflect an unprecedented step of imposing separate monitoring and reporting requirements over and above those water quality protection and monitoring requirements that would be imposed through the timber harvest review process. Such policy shift, they assert, should be established with policy input from the State Water Resources Control Board (State Water Board).

The Orders are not an unprecedented step to be made at the State Water Board level. The Orders fully comport to, and are consistent with, the Basin Plan's Action Plan for Logging, Construction and Associated Activities. The Basin Plan specifically authorizes the Regional Water Board to issue Section 13267 (b) orders to any individual or firm engaged in timber operations, road building, or related construction activity as may be necessary to implement its investigations and carry out the policy of the Regional Water Board.

The Orders are also fully consistent with the timber harvest review process recognized by the 1988 Management Agency Agreement ("MAA") between the State Water Board, the Board of Forestry, and CDF (Attachment 5). By way of background, the State Water Board entered into the MAA to exercise its authority and responsibility under Clean Water Act Section 208 to designate appropriate management agencies for implementing certain provisions of Section 208 Water Quality Management Plans (Section 208 WQM Plans) and to certify such plans that incorporate Best Management Practices (BMPs) for control of non-point sources of pollution, including silvicultural land uses. Through the MAA, the State Water Board designated the Board of Forestry and Fire Protection (BOF) and CDF as joint management agencies for timber operations on nonfederal lands. The State Water Board also certified a Section 208 WQM Plan consisting of water quality-related Forest Practice Rules, the process by which they are promulgated and implemented, and the MAA (which certify certain existing Forest Practice Rules as BMPs and which commit BOF to further refine and develop Forest Practice Rules that can serve as BMPs). Despite the designation of the BOF and CDF as joint management agencies, the State Water Board retains its and the Regional Water Boards' full authority to carry out their statutory mandates. In fact, the MAA specifically states that nothing in the agreement limits the "legal authority or responsibility of the Water Board or the Regional Boards in carrying out their mandates for control of water pollution and protection of the quality and beneficial uses of the State's waters." Thus, THP review process is not the exclusive means by which to protect water quality, as suggested by SCA and RRR.

SCA and RRR assert in their petitions that the M&Rs are duplicative and unnecessary in light of their respective commitments in the THPs to conduct road related corrective measures and the hillslope effectiveness monitoring. The objectives and design of the SCA/RRR/CDF monitoring plan and the Regional Water Board staff's water quality monitoring plan are fundamentally different. As has been stated, the Regional Water Board staff's M&Rs require instream turbidity monitoring triggered by the turbidity levels of the water treatment plant causing plant shutdowns or significant storm events. Inspections required by the M&Rs are initiated promptly when those turbidity levels are found to exceed 60 NTUs and thus enable early detection of the sources of sediment. The proposed upgrade road work by SCA and RRR does not provide a mechanism to assess the cause (sources) of excess instream turbidity levels. The goal of the Regional Water Board staff's water quality monitoring plan is to ensure logging, construction and associated activities in Jenner Gulch are in compliance with the objectives and prohibitions of the Basin Plan. Given these different goals and monitoring designs, the

Orders are not duplicative or burdensome, but rather are reasonably related to the need and benefits to be obtained.

Another major issue SCA and RRR raise is that to the extent the Orders are directed at ongoing discharges associated with legacy conditions, the Orders improperly seek to regulate passive ownership of land. They both assert that ongoing sediment runoff discharges caused by legacy conditions are not discharges or proposed discharges by SCA and RRR for purposes of a Section 13267 (b) Order.

The Orders are, directed at ongoing sediment discharge during significant rain events and threatened discharges caused by and associated with legacy and proposed logging, construction and associated activities. The State Water Board and the Regional Water Boards have frequently and consistently held that a landowner who is not directly responsible for an ongoing discharge nonetheless permits the discharge if he or she has knowledge of the discharge and the ability to control it, and is thus a discharger. See, e.g., In the Matter of Petitions of Arthur Spitzer et al., Order No. 89-8 (SWRCB 1989). Here, SCA and RRR have knowledge of these legacy conditions causing ongoing discharges during significant rain events and have the ability to control the discharges; therefore, they are dischargers and are discharging such that they are within the ambit of Section 13267. Moreover, at least in the case of RRR, some of the ongoing discharges during significant rain events were directly caused by its road system and used by RRR for timber harvest activities. See Regional Water Board staff PHI reports for THP 1-99-464 SON for specific observations about the current condition of the road and the map for THP 1-79-175 SON (Attachment 4) for road location from past activity.

SCA and RRR also object to the Regional Water Board staff's determination that a Basin Plan violation has occurred, even though the Basin Plan prohibition on discharges in quantities deleterious to fish, wildlife and beneficial uses is tied to logging, construction and associated activities. SCA and RRR contend that they have yet to engaged in these activities. It must be stressed that whether there has been a violation of the Basin Plan prohibitions need not be shown for purposes of a Section 13267 Order. In any event, the Basin Plan prohibitions related to logging, construction and associated activities are tied to logging, construction and associated activities; however any associated discharge need not be contemporaneous with such activities for there to be a violation of the Basin Plan. Where there is a discharge from a current landowner's property (in quantities deleterious to fish, wildlife and beneficial uses) associated with past and/or present logging, construction and associated activities, the Basin Plan prohibition has been violated and the landowner is responsible for the discharge. Here, the historical and current land uses of the THP areas have been logging, construction and related activities such that ongoing discharges could be tied to such activities and could be violations of the Basin Plan prohibitions.

Finally, in their petitions and elsewhere, SCA and RRR have objected to the issuance of the M&Rs to them and not the other landowners in the watershed. The M&Rs were issued to SCA and RRR as a result of their proposed land management activities (timber harvest and extensive road repairs), the ongoing threat of controllable sediment discharges from failing road crossings and poorly drained and maintained roads, and Regional Water Board staff's knowledge of the condition of the SCA and RRR property in the Jenner Gulch watershed. If Regional Water Board staff become aware of other properties in the watershed that have existing or threatened violations of the Basin Plan objectives and prohibitions, issuance of monitoring plans to other landowners may be deemed appropriate. This

determination would be based on further investigation in the watershed based on complaints from the public, data generated from the M&Rs issued to SCA and RRR or from additional inspections on future projects.

VI. Conclusion

Regional Water Board staff are concerned about the potential significant impacts and further degradation of the beneficial uses of water (including domestic water supply and cold freshwater fisheries habitat) from excess sediment resulting from the proposed activities associated with the THPs in Jenner Gulch. In Regional Water Board staff's judgement, the M&Rs issued to Sonoma Coast Associates and Russian River Redwoods are reasonable with regards to the need for the reports, the costs of conducting the monitoring, and the benefits to be obtained from the reports.

In Regional Water Board staff's judgement, well-designed water quality monitoring will detect impacts from the plan area such that those problems can be remedied in a timely manner and avoid further long-term impacts to water quality. Timely water quality monitoring is essential to determine if adverse impacts to water quality are occurring from the plan's activities so that those adverse impacts can be remedied and practices which contributed to the problems can be avoided on both the current and future plans.

Recommendation:

Staff recommends that the Regional Water Board ratify the Executive Officer's 13267 (b) Orders for monitoring and reporting.